What is claimed is:

1. A method for improving printer characterization to more accurately reproduce desired colors on a destination printing device given the ambient illumination at the location where the printer's output is intended to be viewed, comprising:

   a) producing a target consisting of pairs of metamers, where each pair matches for one illuminant and mismatches for others;

   b) viewing said target under the illumination for which characterization is desired;

   c) selecting a best match from said metameric pairs, which estimates said viewing illumination;

   d) entering an indicator of said estimated viewing illumination; and

   e) adjusting the characterization data to correspond to said estimated viewing illumination.

2. A method for improving printer characterization, as in **claim 1**, wherein the production of the target comprises:

   a) choosing a base color; and

   b) for each illuminant of interest,

   • determining a metameric match to said base color; and

   • placing said base color adjacent to said metameric match to form a matched pair.

3. A method for improving printer characterization, as in **claim 2**, wherein said metameric matched pairs are produced using different colorants.

4. A method for improving printer characterization, as in **claim 2**, wherein determining said metameric matched pairs comprises a re-characterization using differing GCR strategies for each illuminant of interest.

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5. A method for improving printer characterization, as in claim **4**, further converting said base color to device values, CMYK, using said re-characterization.

6. A method for improving printer characterization, as in **claim 1**, wherein the targets are either bipartite patches, concentric patches, readability tasks, or half-and-half images.

7. A method for improving printer characterization, as in **claim 1**, further rendering the illumination-determination target on said color reproduction device.

8. A method for improving printer characterization, as in **claim 1**, wherein the target for said color reproduction device has been prepared in advance of characterization.

9. A method for improving printer characterization, as in claim **8**, wherein the target for said color reproduction device is shipped or otherwise provided with said device.

10. A method for improving printer characterization tables, as in **claim 1**, wherein said indicator is entered via a Digital Front End (DFE) or print driver to the printer.

11. A method for improving printer characterization, as in **claim 1**, further comprising a Graphical User Interface (GUI) for indicating said estimation of illumination.

12. A method for improving printer characterization, as in **claim 1**, wherein each illuminant of interest represented in said illumination-determination target is a profile.

13. A method for improving printer characterization, as in claim **12**, wherein said profile is applied as a result of the indication of illumination.

14. A method for improving printer characterization, as in **claim 1**, wherein said estimated illumination is used to modify said characterization via a pre- or post-transformation.

15. A method for improving printer characterization, as in **claim 1**, wherein device values for metameric matches are derived using a cellular Neugebauer model.

16. A method for improving printer characterization, as in **claim 1**, wherein one half of each said matched metameric pairs is produced with blacK (K) only and the other half is produced with Cyan, Magenta, and Yellow (CMY).

17. A method for improving printer characterization, as in **claim 16**, wherein producing said metameric pairs comprises, for each illuminant of interest,:
    a) printing Cyan, Magenta, Yellow, and blacK (CMYK) sweeps;
    b) measuring color values of said CMYK sweeps;
    c) building gray-balanced Tone Reproduction Curves (TRCs) based on said measured color values;
    d) inputting a value n into said gray-balanced TRCs to determine CMY colorant values; and
    e) inputting said value n into said gray-balanced TRCs to determine K colorant value.